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Technology 7

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01/5/16

BYOD

AIM- Part 2 of Final

Do Now: Get a piece of scrap paper and draw a bridge

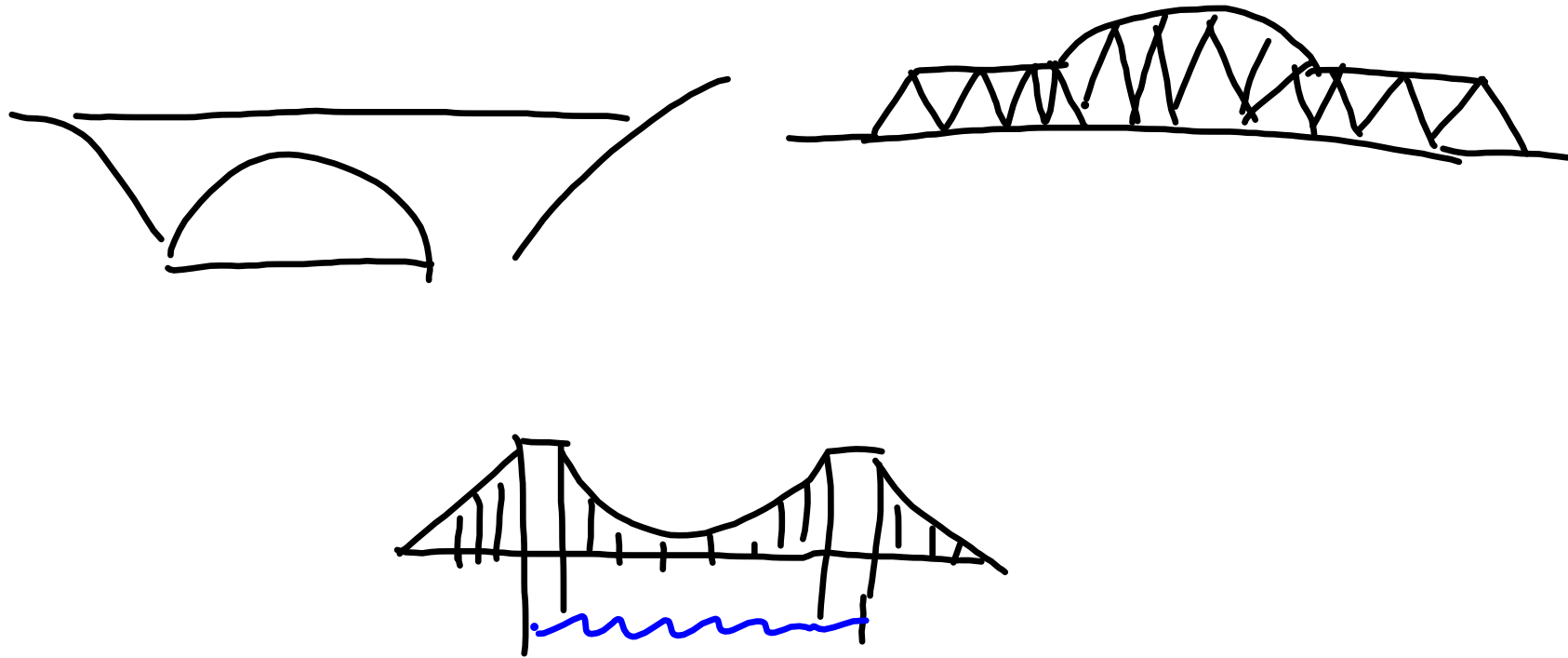
Part 2 of Final will begin today and end 1/18/16 at 4 PM.

Part 1 1/20 or 1/21/16

Bridge Design winner, \$210,736.64

S1 WPBD winner \$5 Dunkin Donuts Gift Card.

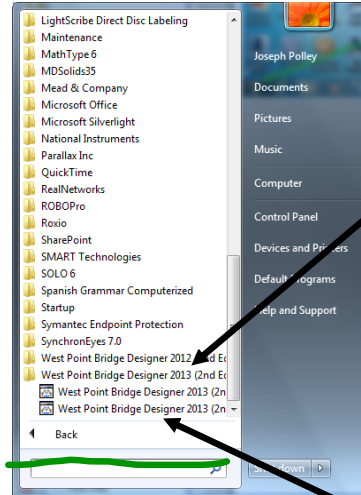
Beat the number and get a prize.



Truss Design Bridge



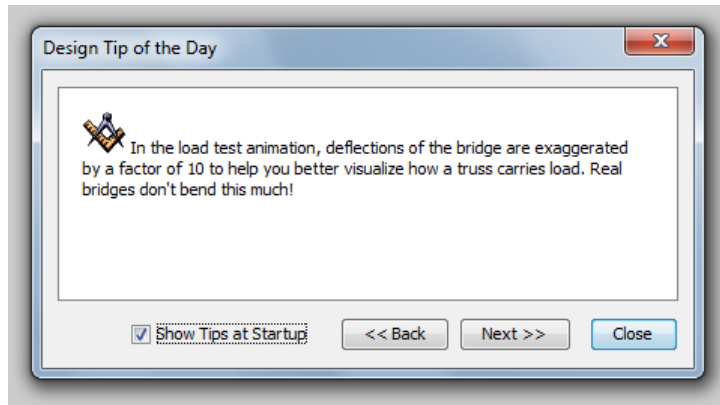
1. click on windows start menu



2. click on all programs

3. scroll to bottom and select West Point Bridge Builder 2013

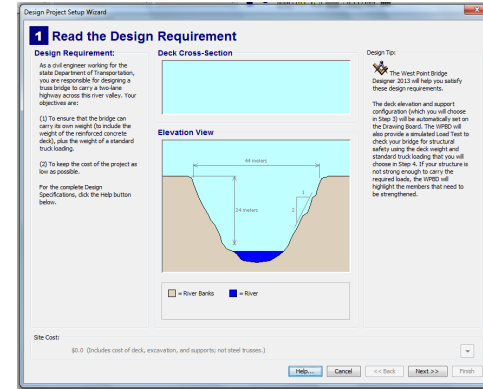
4. Then select the bottom of the 2 choices (DON'T select Older computer)



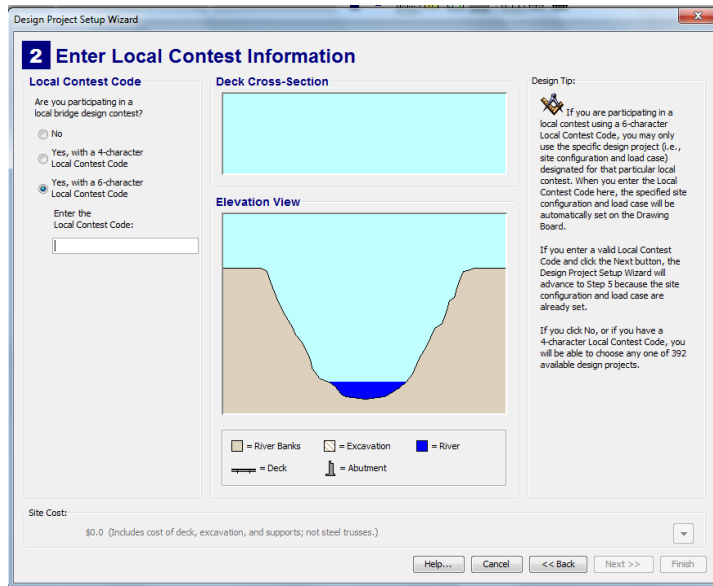
Select close



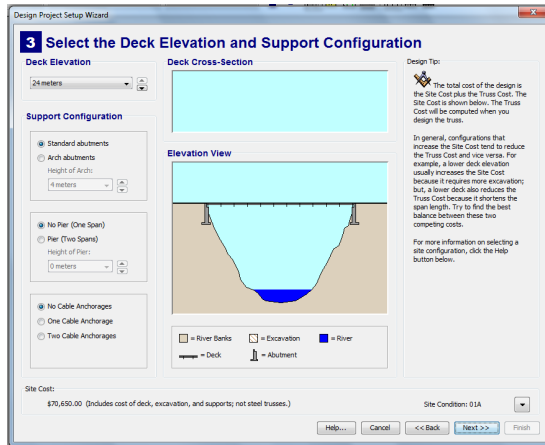
5) Select OK (on 2nd day select load bridge design & open your bridge design)



6) Select Next



7) There is no Contest Code Select Next.



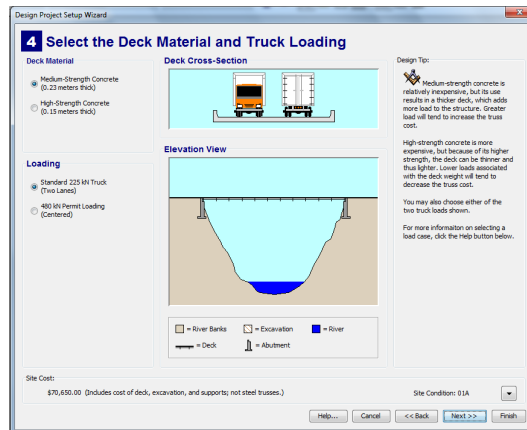
Screen 3 Elevation & Supports

Elevation set to 24 meters

Standard Abutments

No Pier

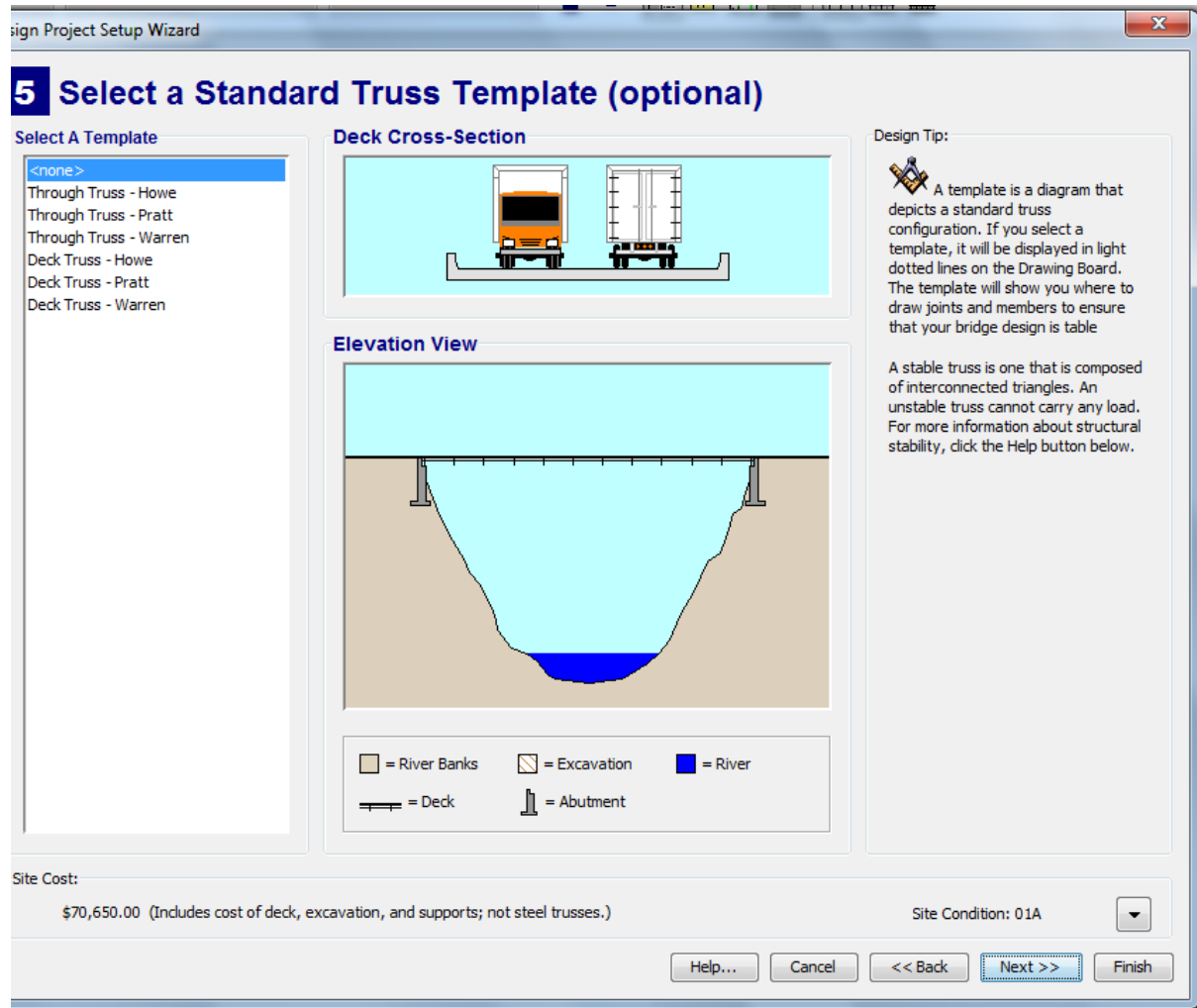
No Cable Anchorage



Deck Material & Truck

Leave the defaults.

Select Next.



Screen 5 Truss

For the final submission the default of no template should be selected.

Then select Next.

For practice purposes you should select Through Truss Warren. This will help you learn the shape and alignment of the truss structure.

Screen 6 Title block

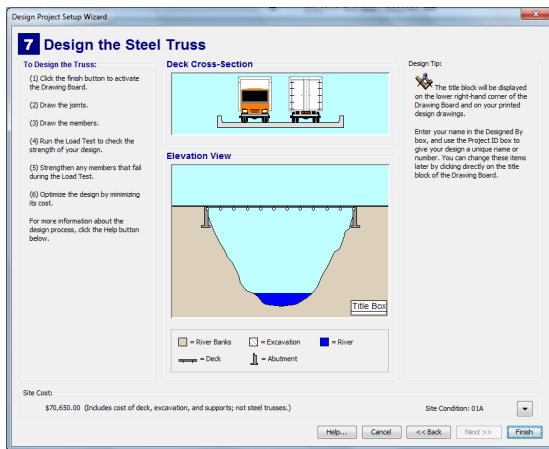
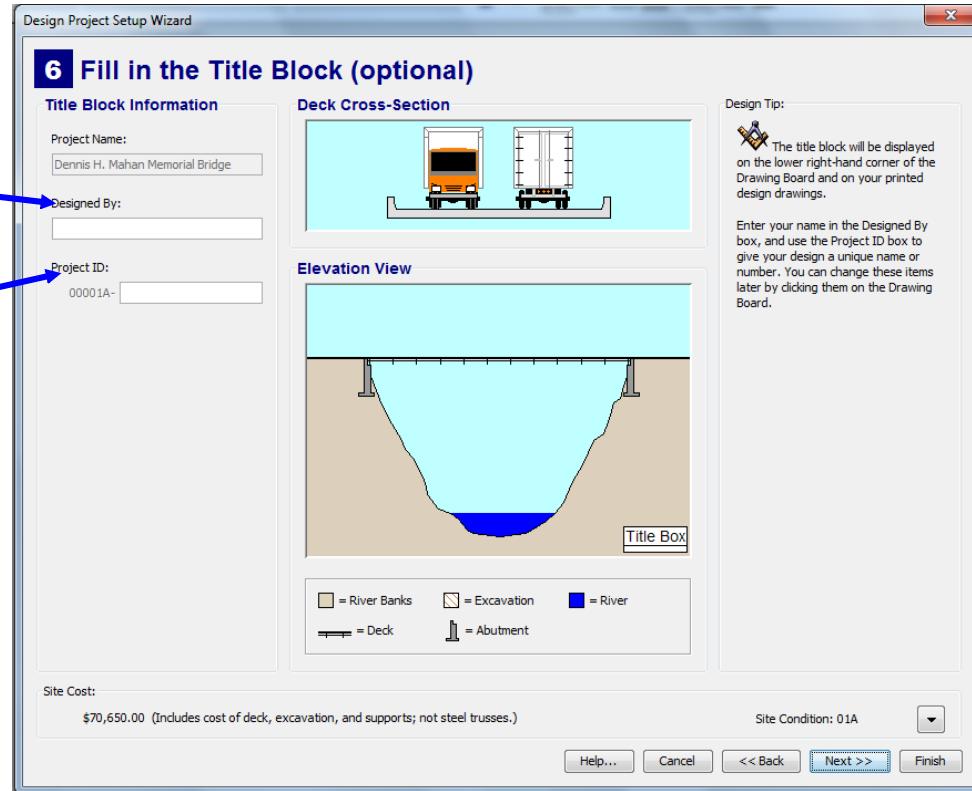
Designed By:

Your Full Name

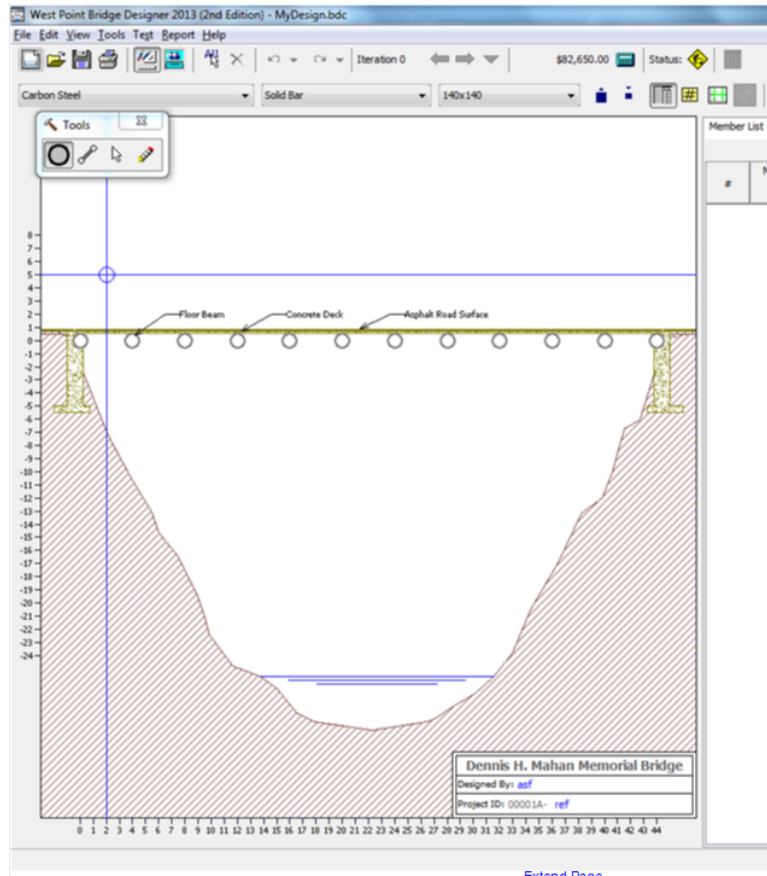
Project ID:

P9 Even

Then select Next.



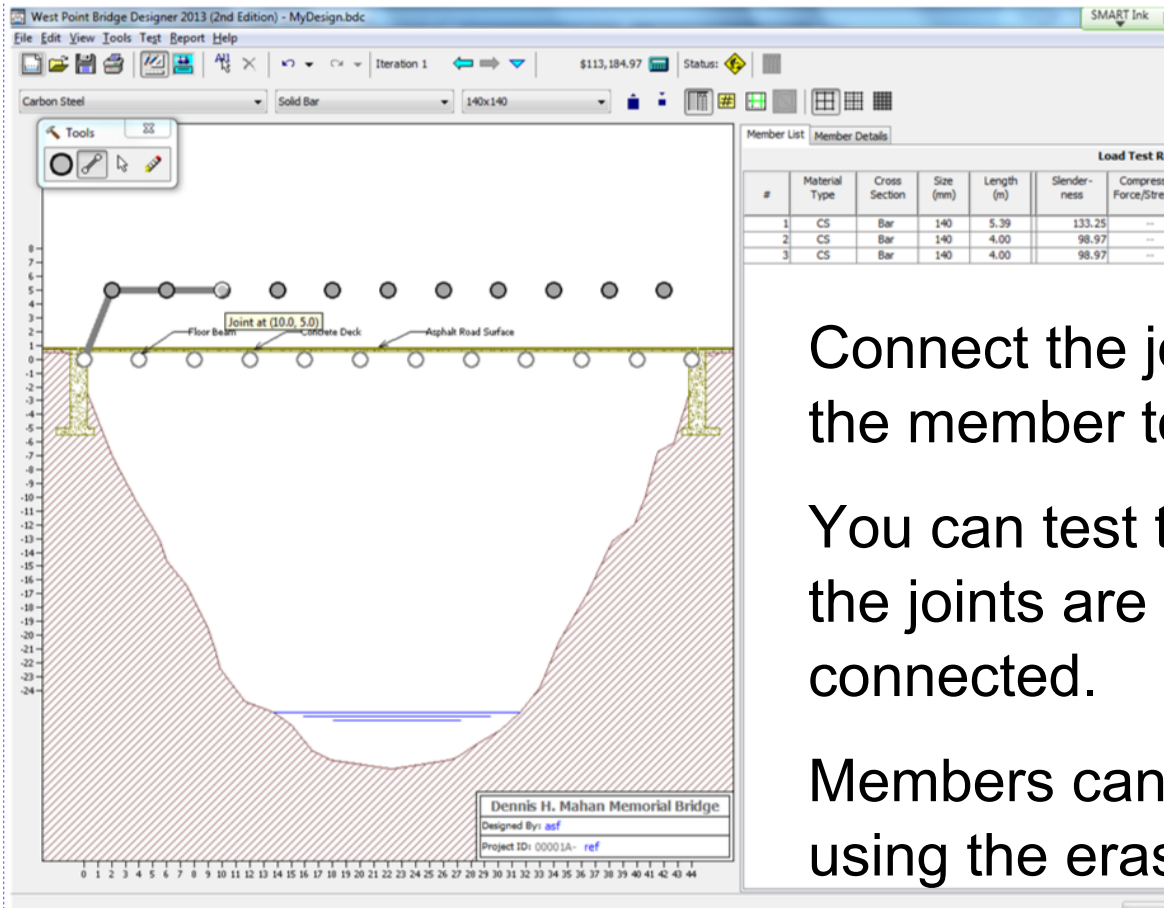
Make a note of the steps and cost.
Select Finish



To place joints the joint tool must be selected. Then position the joint using the cross hairs and left click.

Joints can be deleted using the eraser tool.

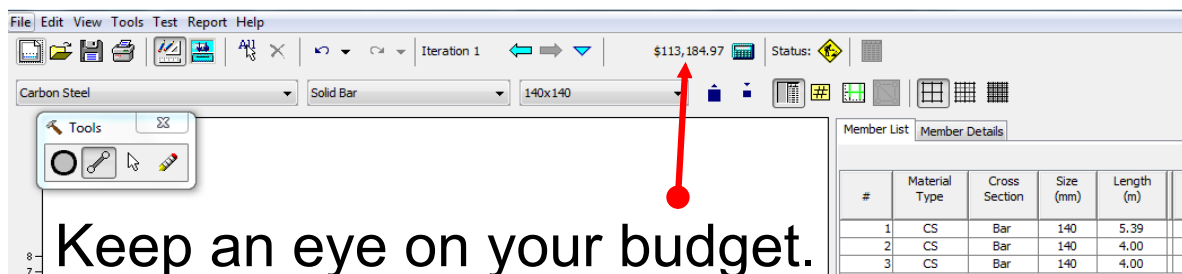
If you are working on the practice template place the joints on top of the spot shown.



Connect the joints using the member tool.

You can test the bridge if the joints are not connected.

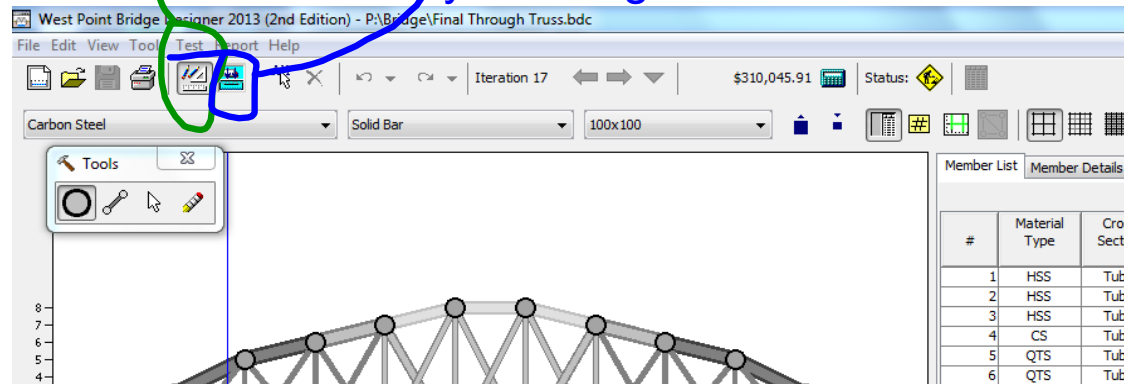
Members can be deleted using the eraser tool.



Keep an eye on your budget.

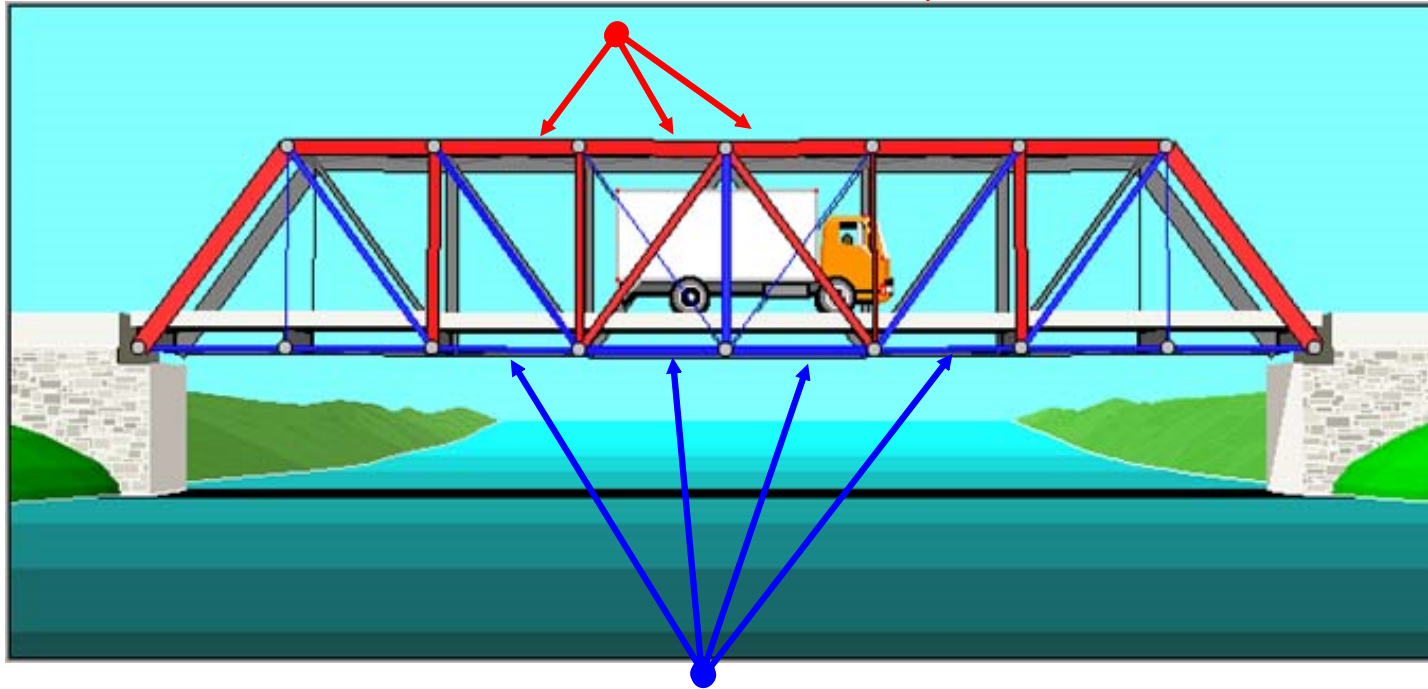
Drawing Board is the part of the program that allows you work on your bridge.

Run Load Test is the part of the program that allows you to test your bridge.



There are two ways to switch between Drawing Board and Load Test. There are two icons just below the test menu that allow you to switch screens. Or you can use the test menu to access the different screens.

These members are under compression



These members are in tension

Change materials, member type, size

Load Test Results						
#	Material Type	Cross Section	Size (mm)	Length (m)	Slenderness	Compression Force/Strength
8	CS	Tube	200	4,00	51,50	1.12
9	CS	Tube	200	4,00	51,50	1.12
11	CS	Tube	200	5,66	72,83	1.06
12	CS	Tube	200	5,66	72,83	1.06
7	CS	Tube	200	4,00	51,50	1.02
10	CS	Tube	200	4,00	51,50	1.02
14	CS	Bar	120	4,00	115,47	0.20
16	CS	Bar	120	4,00	115,47	0.20
19	CS	Bar	120	5,66	163,30	0.10
20	CS	Bar	120	5,66	163,30	0.10
15	CS	Bar	120	4,00	115,47	0.00
1	CS	Bar	120	4,00	115,47	0.00
2	CS	Bar	120	4,00	115,47	0.00
3	CS	Bar	120	4,00	115,47	0.00
4	CS	Bar	120	4,00	115,47	0.00
5	CS	Bar	120	4,00	115,47	0.00
6	CS	Bar	120	4,00	115,47	0.00
13	CS	Bar	120	4,00	115,47	0.00
17	CS	Bar	120	4,00	115,47	0.00
18	CS	Bar	120	5,66	163,30	0.00
21	CS	Bar	120	5,66	163,30	0.00

The columns on the right help you understand your bridge.

**Part 2 Final is due Monday 1/18/15
before 4PM**